U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Barth Smelting Facility - Removal Polrep
Initial Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: **POLREP #1**
Initial - RV2
Barth Smelting Facility

Newark, NJ
Latitude: 40.7361892 Longitude: -74.1402096

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From: Kimberly Staiger, OSC
Date: 5/16/2013
Reporting Period: 05/09/13 to 05/16/13

1. Introduction

1.1 Background

Site Number:	A22L	**Contract Number:**	EP-S2-10-03
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	RV2

Mobilization Date:	5/10/2013	**Start Date:**	5/10/2013
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Emergency Removal Action

1.1.2 Site Description
Barth Smelting Corp. operated on Block 2442, Lots 10, 11, 12 from at least 1946 until approximately 1982, and produced brass and bronze ingots and also worked with non-ferrous metals. Prior operators include General Lead Batteries, a manufacturer of lead acid batteries, and the New Jersey Zinc Company, a former zinc smelter. Barth was listed as an unrecognized Battery Lead Smelter site with a paper titled “Discovering Unrecognized Lead Smelting Sites by Historical Methods” written by William Eckel et al, and published in the American Journal of Public Health, April 2001, however, several resources exist labeling Barth Smelting as a secondary copper smelting facility.

The New Jersey Zinc and Iron Company, also known as the Newark Zinc Works, formerly operated on the property now occupied by the Newark Housing Authority’s Terrell Homes. The Zinc Works was one of the first commercial zinc oxide plants in the United States and operated on this location from 1848 to 1910. In 1946, the Millard E. Terrell Homes, a family development with 275 units, was constructed on the property formerly occupied by the New Jersey Zinc and Iron Company.

1.1.2.1 Location
The Terrell Homes are located in a mixed residential/industrial neighborhood within the Ironbound Section of Newark, Essex County, New Jersey. The property was formerly home to the New Jersey Zinc and Iron Company from 1848 to 1910. The property is bounded to the west by the Passaic River and the Essex County Riverfront Park, to the east by Chapel Street, to the north by the former Barth Smelting Corp. property, and to the west by a large commercial property.

1.1.2.2 Description of Threat
Lead concentrations have been detected exceeding the EPA residential soil screening level of 400 mg/kg within the top one inch of soil at the Terrell Homes within the grassy area immediately adjacent the Community Building which serves as a recreational area for the residents and contains a basketball court and a water park area (sprinklers). The highest concentration of lead detected in the top one inch of soil at this location is 1,600 mg/kg.

Direct contact with the elevated levels of lead within the top one inch of soil may occur through common outdoor activities that occur in the play area, or by tracking lead contaminated dirt inside the home. Contact with the lead contaminated soils may present a health risk to residents, particularly young children.

The effects of exposure to lead are the same whether it enters the body through breathing or swallowing. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults to lead has resulted in decreased performance in some tests that measure functions of the nervous system. Lead exposure may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people, and may also cause anemia.

Lead is a cumulative poison where increasing amounts can build up in the body eventually reaching a point where symptoms and disability occur. Particularly sensitive populations are women of child-bearing age, due to the fetal transfer of lead, and children. Cognitive deficits are associated with fetal and childhood exposure to lead. An increase in blood pressure is the most sensitive adverse health effect from lead exposure in adults. Effects on the kidney, nervous system and heme-forming elements are associated with increasing blood lead concentrations, both in children and adults. Other symptoms include: decreased physical fitness, fatigue, sleep disturbance, aching bones, abdominal pains, and decreased appetite.

The Department of Health and Human Services (DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens based on limited evidence from studies in humans and sufficient evidence from animal studies, and the EPA has determined that lead is a probable human carcinogen.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Soil borings were installed throughout the Terrell Homes property from March 29 - April 1, 2013 to determine if historic operations conducted on this property and adjacent properties had impacted the soils. A total of thirty soil borings were installed throughout the property. Twenty-four soil borings were installed in unpaved areas, and six soil borings were installed in an asphalted area located on the northern corner of the Terrell Homes property. Each soil boring was completed to a depth of two feet. Soil samples were collected from each boring at the following depth intervals: 0 to 1 inches, 1 to 6 inches, 6 to 12 inches, 12 to 18 inches and 18 to 24 inches bgs. For the borings installed within the asphalted area, the 0 to 1 inch depth interval was not collected, since the asphalt was one inch thick. An additional six locations where bare soil was present were sampled to a depth of 6 inches. A hand auger was used to collect soil samples from depth intervals at 0 to 1 inch and 1 to 6 inches. All soil samples collected were submitted for laboratory analysis for Target Analyte List (TAL) Metals plus tin and mercury.

Two of the soil borings were installed in a grassy area adjacent the Community Building. The Community Building serves as a recreational area for the residents and contains a water park area (sprinklers) for children to play outdoors and a basketball court. Elevated levels of lead, which pose a significant threat to the local residents, were detected in the grassy area immediately adjacent the water park area.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On May 9, 2013 EPA received verbal authorization to conduct an emergency removal action to install a temporary chain link fence around the grassy areas adjacent the Community Building. Soil sampling data has identified this area of the Site to contain elevated levels of lead at or near the surface which may pose adverse health effects to the residents. This will be the second removal action conducted on this property.

On May 10, 2013, EPA met with representatives from the Newark Housing Authority (NHA) to discuss the sampling results and actions to be taken to restrict access to the grassy area adjacent the sprinkler park. NHA stated that they would install a temporary construction fence around the area to restrict access until EPA could install a more permanent temporary fence.This area is located in the grassy areas around the Community Building of the housing development and contains an outdoor recreational area. This area is utilized by residents year round and as a water park during warmer weather. Elevated levels of lead, which pose a significant threat to the local residents, were detected in the grassy area immediately adjacent the water park area.

2.1.2 Response Actions to Date

EPA mobilized to the Terrell Homes with ERRS on May 13, 2013 to install the fencing and restrict access to the grassy areas adjacent the Community Building. A temporary chain link fence standing 6' high was installed on May 13, 2013. A swing gate was installed on the fencing across an access driveway at the rear of the building to allow access for delivery vehicles and maintenance staff. A key to the chained gate was provided to the NHA Terrell Homes property manager and the maintenance supervisor for Terrell Homes.

On May 16, 2013 signs were posted on the fencing warning residents of the lead hazards present in the soil.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

PRPs have not been identified to date, but a PRP search will continue.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Volume*	*Manifest #*	*Treatment*	*Disposal*
Lead	Soil	not documented	N/A	Installed fence	N/A

2.2 Planning Section

2.2.1 Anticipated Activities

Additional soil sampling will be performed May 15 - 16, 2013 to characterize the nature and extent of the lead contamination present in the soils at this portion of the Terrell Homes property.

2.2.1.1 Planned Response Activities

Additional soil sampling is required in the grassy area adjacent the Community Building to fully characterize the nature and extent of the lead in soils before determining the appropriate removal action to be taken on this property.

A public meeting will be held at a future date to discuss the sampling results and planned actions on the Terrell Homes property.

2.2.1.2 Next Steps

- Hold a public availability session
- Conduct additional soil sampling
- Determine the appropriate removal action for the playground area and the grassy area adjacent the Community Building

2.2.2 Issues

The Terrell Homes is located in the Ironbound section of Newark, a recognized Environmental Justice community that has many disadvantages. The Terrell Homes property is a low-income public housing development that houses 275 apartment units. Occupancy of public housing at Newark Housing Authority properties is dictated by income, with preferences for elderly, disabled and DYFS (Division of Youth and Family Services) referrals.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4.1 Narrative

Verbal authorization to conduct a removal action at the Barth Smelting Site was received on May 9, 2010. This is the second removal action on this Site.

ERRS contractor mobilized to the Site to determine measurements for the area to be fenced on May 10, 2013. ERRS contractor returned to the Site with a subcontractor to install the temporary fencing on May 13, 2013.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$35,000.00	$2,500.00	$32,500.00	92.86%
Intramural Costs				
Total Site Costs	$35,000.00	$2,500.00	$32,500.00	92.86%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

Newark Housing Authority
Newark Department of Health

4. Personnel On Site

No information available at this time.

5. Definition of Terms

ERRS - Emergency and Rapid Response Services
RST - Removal Support Team

6. Additional sources of information

6.1 Internet location of additional information/report

Additional information on the Barth Smelting site can be found at http://www.epa.gov/region2/superfund/removal/barth/index.html and at www.epaosc.org/Barthsmelting.

7. Situational Reference Materials

No information available at this time.